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EXAMINER
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NALEVANKO, CHRISTOPHER R

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/709,303

Applicant(s)

PARK ET AL.

Examiner

Christopher R Nalevanko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 08/23/2004 have been fully considered but they are not persuasive.

Regarding Claims 1, 7, and 12, specifically the Mao reference, Applicant argues that “Mao fails to teach or suggest each and every claimed element. For example, independent claim 1 recites, in part, ‘checking whether or not the data contents to be displayed are consistent with the current A/V signal.’...Mao cannot be relied upon to teach or suggest at least this feature” (page 23 lines 8-13). Applicant further argues, “Mao further discloses that the available Simulcast Web pages are changed whenever the corresponding broadcast video program changes. Para 0029. Because the list of available Simulcast Web pages is purely dependent on the currently viewed program, there is simply no need to check whether or not the data contents to be displayed, namely the Simulcast Web pages, are consistent with the current A/V signal. Indeed, Mao is entirely silent regarding checking for consistency whatsoever” (page 25 lines 8-15). Examiner asserts that it is necessary in the system of Mao to check if the data is consistent with the A/V signal. When a user changes a channel, the processor “checks” to see what web pages are synchronized, or consistent, with the newly tuned content (page 4 section 0058, locating desired webpage, page 5 section 0063, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program). It does not matter that there is a list of available

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Simulcast Web pages. When the processor receives a change channel command, it still must “check” the list of available pages for consistent information. Furthermore, when a channel change request occurs, the data is known to be “not consistent” with the A/V programming. This in turn triggers the processor to check for consistent data. Since the processor must search for synchronized data in the data stream or cache, it inherently is checking to see what data is consistent, or synchronized, with the currently displayed content.

2. Applicant’s arguments filed 08/23/2004, with respect to the 35 USC 112 2<sup>nd</sup> paragraph rejections have been fully considered and are persuasive. The 112 2<sup>nd</sup> paragraph rejections of 1-6, 14, and 18 has been withdrawn.
3. Applicant’s failure to adequately traverse the Examiner’s taking of Official Notice in the last office action is taken as an admission of the facts noticed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6-8, 12,14-17, and 20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Mao et al.

Regarding Claim 1, Mao shows a data contents processing method, comprising steps for separating audio/video signals and data contents upon receipt of a broadcast signal and extracting information on the currently received channel and a program identifier (page 2 sections 0019-0022), constructing a database by forming an integrated information of the channel/program identifier information and data contents in connection with each other (page 2 sections 0019-0026), controlling the conversion of data contents by checking whether or not the data contents to be displayed are consistent with the current A/V material (page 2 sections 0026-0029, page 3 sections 0030-0033, page 4 section 0058, locating desired webpage, page 5 section 0063, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program), and displaying the converted data contents with the A/V signal (page 4 sections 0059, page 5 section 0063), wherein the conversions of data contents includes displaying different data contents and conversion of the channel includes changing the channel (page 3 section 0031, page 6 sections 0081-0082, changing content is synchronized with channel change). Mao shows a system the downloaded and extracts Internet information associated with a television signal. This information is stored and used to associate additional information with programming data. When a user changes a channel, the system checks to see if the additional data corresponds to the A/V signal. If there is different Internet data to be displayed, the system displays the new additional data on screen.

Regarding Claim 2, Mao shows that if a channel is changed, the additional data is changed as well (page 4 section 0059).

Regarding Claim 3, Mao shows that, no matter what channel is displayed, the additional data always corresponds to the A/V material being shown (page 2 0019-0028, page 3 sections 0030-0031, page 4 section 0059).

Regarding Claim 6, Mao shows adjusting a channel to show the A/V signals and data content (page 5 section 0070).

Regarding Claim 7, Mao shows a data contents processing method, comprising steps for separating audio/video signals and data contents upon receipt of a broadcast signal and extracting information on the currently received channel and a program identifier (page 2 sections 0019-0022), constructing a database by forming an integrated information of the channel/program identifier information and data contents in connection with each other (page 2 sections 0019-0026), if the data contents to be displayed are not consistent with the current A/V signal according to the integrated information, judging whether or not the data contents to be displayed and the current A/V signals are consistent with each other (page 2 sections 0026-0029, page 3 sections 0030-0033, page 4 section 0058, locating desired webpage, page 5 section 0063, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program), and displaying the converted data contents with the A/V signal (page 4 sections 0059, page 5 section 0063), wherein the conversions of data contents includes displaying different data contents and conversion of the channel includes changing the channel (page 3 section 0031, page 6 sections 0081-0082, changing content is synchronized with channel change). Mao shows a system the downloaded and extracts Internet information associated with a television signal. This information is

stored and used to associate additional information with programming data. When a user changes a channel, the system checks to see if the additional data corresponds to the A/V signal. If there is different Internet data to be displayed, the system displays the new additional data on screen.

Regarding Claim 8, Mao shows displaying the A/V signal and corresponding data content if the data contents is consistent with the A/V signal (page 5 section 0063-0067, 0070).

Regarding Claim 12, Mao shows an inverse multiplexing unit (page 4 section 0060, fig. 8, demodulator and demultiplexer), a database constructing unit (page 4 section 0055-0056, storing HPAT database, page 5 sections 0063-0069, cache and storage), an A/V interface control unit (fig. 8 item 814, micro processor), and a browser unit for displaying the current A/V signal and database content (fig. 8 item 816 and 820, WWW browser connected to TV). All of the remaining limitations of the Claim have been discussed with regards to Claim 7.

Regarding Claim 14, Mao shows the use of multiple multiplexing units and demultiplexing units for displaying the A/V signals on a display unit (fig. 7 & 8).

Regarding Claim 15, Mao shows a database constructing unit with storage for storing the separated data (page 2 sections 0021-0022, page 5 sections 0065-0068).

Regarding Claim 16, Mao shows a plurality of programs corresponding to one channel, and a plurality of data contents corresponding to each program (fig. 4 and fig. 6).

Regarding Claim 17, Mao shows that when a user selects a new channel the system checks to see if there is corresponding data contents and controls the browser to display the corresponding data contents (page 2 sections 0026-0029, page 3 sections 0030-0033, page 4 sections 0058-0059, locating desired webpage, page 5 section 0063, 0070, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program). Since the processor synchronizes the data contents and AV signal, it automatically controls the browser to select the data contents corresponding to the channel.

Regarding Claim 20, Mao shows a data content processing method comprising receiving a bit stream of broadcast data (fig. 8 item 802), separating audio/video signals and data contents upon receipt of a broadcast signal from the bit stream of a selected channel (page 2 sections 0019-0022)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 8, 19, 20, 22-27, and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al in further view of Kaplan.

Regarding Claim 4, Mao fails to show that if the current user desired data contents are selected, the current channel is tuned to the channel corresponding to the selected data. Kaplan shows tuning to a channel based upon changing the data contents



(col. 6 lines 22-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mao with the ability to change the channel tuned by selecting different content data so that the user would be provided with the appropriate television signal while he or she was surfing the Internet. Furthermore, this would provide an added navigational means in which the user could search for desired material.

Regarding Claim 5, Mao fails to specifically state viewing only the broadcast channel. Kaplan shows viewing only the broadcast channel (col. 6 lines 17-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mao with the ability to only tune to the broadcast channel in case the user was not interested in additional content.

Regarding Claim 18, Mao shows using a demultiplexer, or inverse multiplexer, to tune the television signal (fig. 8). Mao fails to show that if the current user desired data contents are selected, the current channel is tuned to the channel corresponding to the selected data. Kaplan shows tuning to a channel based upon changing the data contents (col. 6 lines 22-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mao with the ability to change the channel tuned by selecting different content data so that the user would be provided with the appropriate television signal while he or she was surfing the Internet. Furthermore, this would provide an added navigational means in which the user could search for desired material.

Neither Mao nor Kaplan shows using a forward or back button. Official Notice is given that it is well known and expected in the art to use a forward and a back button while using an Internet browser. Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the system of Mao and Kaplan to use a forward and back button on the browser so the user could access pages that he or she had recently viewed.

Regarding Claim 19, Neither Mao nor Kaplan shows using a forward or back button. Official Notice is given that it is well known and expected in the art to use a forward and a back button while using an Internet browser. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao and Kaplan to use a forward and back button on the browser so the user could access pages that he or she had recently viewed.

Regarding Claim 20, Mao shows a data content processing method comprising receiving a bit stream of broadcast data (fig. 8 item 802), separating audio/video signals and data contents upon receipt of a broadcast signal from the bit stream of a selected channel (page 2 sections 0019-0022), and when a user selects a new channel the system checks to see if there is corresponding data contents and controls the browser to display the corresponding data contents (page 2 sections 0026-0029, page 3 sections 0030-0033, page 4 sections 0058-0059, locating desired webpage, page 5 section 0063, 0070, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program). Since the processor synchronizes the data contents and AV signal, it automatically controls the browser to select the data contents corresponding to the channel. Mao also shows displaying the AV signals and corresponding data contents (page 4 section 0058, page 5 section 0070). Mao fails to show that if the current user desired data contents are selected, the current channel is

tuned to the channel corresponding to the selected data. Kaplan shows tuning to a channel based upon changing the data contents (col. 6 lines 22-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mao with the ability to change the channel tuned by selecting different content data so that the user would be provided with the appropriate television signal while he or she was surfing the Internet. Furthermore, this would provide an added navigational means in which the user could search for desired material.

Regarding Claim 22, Mao shows determining if the requested content is in a local storage, retrieving the content if it is in the local storage, and retrieving the content from a bit stream, or carousel stream, if the content is not in storage (page 5 sections 0065-0070, checking the cache for the content, then checking the carousel stream).

Regarding Claim 23, Mao and Kaplan fail to show displaying a message that the A/V signal cannot be displayed or the function of the browser is not operable. Official Notice is given that it is well known and expected in the art to display information regarding a signal's inability to be processed and displayed. This communicates to the user that the required data is not available (for example a 'server not found error' during Internet use). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao and Kaplan with the ability to inform the user that the required data to display an A/V signal or browser signal could not be received so that the user was aware of the communications problem.

Regarding Claim 24, Mao shows constructing a database of integrated information of channels and corresponding data contents from the bit stream (page 4

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sections 0052-000060, 0062, page 5 sections 0063-0068, storing multiple tables and content in the local storage).

Regarding Claim 25, Mao shows that the stored tables and content are used to determine if the data contents corresponds to the channel (page 5 section 0063, looks up PID and other tables to determine content).

Regarding Claim 26, Mao shows that the relationship between the content and channel is determined by the associated tables (page 5 section 0063, looks up PID and other tables to determine content).

Regarding Claim 27, Mao shows an apparatus to perform data content processing comprising an inverse multiplexing unit (page 4 section 0060, fig. 8, demodulator and demultiplexer) for receiving a bit stream of broadcast data (fig. 8 item 802), separating audio/video signals and data contents upon receipt of a broadcast signal from the bit stream of a selected channel (page 2 sections 0019-0022), a browser unit for displaying the current A/V signal and database content (fig. 8 item 816 and 820, WWW browser connected to TV), and a data unit interface for determining when a user selects a new channel the system checks to see if there is corresponding data contents and controls the browser to display the corresponding data contents (page 2 sections 0026-0029, page 3 sections 0030-0033, page 4 sections 0058-0059, locating desired webpage, page 5 section 0063, 0070, processor controlling the searching of the webpages, page 6 section 0081, synchronized to the content of the broadcast video program). Since the processor synchronizes the data contents and AV signal, it automatically controls the browser to select the data contents corresponding to the channel. Mao also shows displaying the AV

signals and corresponding data contents (page 4 section 0058, page 5 section 0070). Mao fails to show that if the current user desired data contents are selected, the current channel is tuned to the channel corresponding to the selected data. Kaplan shows tuning to a channel based upon changing the data contents (col. 6 lines 22-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mao with the ability to change the channel tuned by selecting different content data so that the user would be provided with the appropriate television signal while he or she was surfing the Internet. Furthermore, this would provide an added navigational means in which the user could search for desired material.

Regarding Claim 29, Mao shows determining if the requested content is in a local storage, retrieving the content if it is in the local storage, and retrieving the content from a bit stream, or carousel stream, if the content is not in storage (page 5 sections 0065-0070, checking the cache for the content, then checking the carousel stream).

Regarding Claim 30, the limitations of the claim have been discussed with regards to Claim 23.

Regarding Claim 31-33, the limitations of the claims have been discussed with regards to Claims 24-26, respectively.

6. Claims 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al.

Regarding Claim 9, Mao fails to show displaying a message that the A/V signal cannot be displayed or the function of the browser is not operable. Official Notice is given that it is well known and expected in the art to display information regarding a

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signal's inability to be processed and displayed. This communicates to the user that the required data is not available (for example a 'server not found error' during Internet use). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao with the ability to inform the user that the required data to display an A/V signal or browser signal could not be received so that the user was aware of the communications problem.

Regarding Claim 10, Mao shows controlling the channel and the browser according to a user's request and storing the data contents (page 4 sections 0057-0059, page 5 sections 0066-0067, page 6 sections 0081-0082). Mao fails to show storing the A/V signal. Official Notice is given that it is well known and expected in the art to store television programming A/V signals for later viewing and reproduction. This allows the user to view a program at his or her convenience. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify Mao with the ability to store the programming signals so that a user could reproduce the program at a later time.

Regarding Claim 13, Mao does not show a forward/backward button. Official Notice is given that it is well known and expected in the art to use a forward and a back button while using an Internet browser. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao to use a forward and back button on the browser so the user could access pages that he or she had recently viewed.

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7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al in further view of Shoff.

Regarding Claim 11, Although the system of Mao seems completely capable of displaying only the A/V signals, this is not specifically stated. Shoff shows displaying only the A/V signals when there is no supplemental information (col. 9 lines 1-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao with the ability to display only A/V signals so that, in the event that there is no supplemental information, the browser is not operated.

8. Claims 21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al in further view of Kaplan and Shoff.

Regarding Claim 21, Although the system of Mao seems completely capable of displaying only the A/V signals, this is not specifically stated in Mao or Kaplan. Shoff shows displaying only the A/V signals when there is no supplemental information (col. 9 lines 1-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Mao and Kaplan with the ability to display only A/V signals as in Shoff so that, in the event that there is no supplemental information, the browser is not operated.

Regarding Claim 28, the limitations of the claim have been discussed with regards to Claim 21.

### ***Conclusion***

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R Nalevanko whose telephone number is 703-305-8093. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 703-305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Christopher Nalevanko

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A handwritten signature in black ink, appearing to read "Chris Grant", with a stylized flourish at the end.

**CHRIS GRANT**  
**PRIMARY EXAMINER**